

**REMARKS/ARGUMENTS**

The Examiner's Action of December 10, 2004, has been received and reviewed by counsel for Assignee. In that Action claims 1-13 were presented for examination and rejected. In addition, objection as made to the specification and the drawings.

By this response counsel proposes amending the drawings in a certain manner believed to overcome the rejection. In addition, reference to the appropriate drawings is now being made in the specification at the appropriate locations.

All claims were rejected under 35 U.S.C. § 102 or § 103. Claims 1-3, 5, 8, 10 and 12 were rejected under § 102(b) as anticipated by *Asakawa, et al.*, in U.S. Patent 6,072,458. Claims 4, 9 and 13 were rejected as obvious in view of references enumerated in the Action.

*Asakawa, et al.*, discloses a projection-type liquid crystal display device that includes a light source cooling fan 19 and a liquid crystal panel cooling fan 20. One fan inputs air, while the other exhausts air. If the temperature of the panel is under a predetermined temperature, the cooling fans can be changed so that air flows from the light source toward the liquid crystal panel. In *Asakawa, et al.*, the cooling air path is formed by the light source cooling source fan 19 and the liquid crystal panel cooling fan 20 so that the light source cooling fan also cools the liquid crystal panels 12, 13 and 14. The light source cooling fan 19 is placed near the light source; however, it is not exclusively for the use of cooling that light source. Furthermore, the light source 1 and the liquid crystal panels 12, 13 and 14 are placed in the cooling air path. Therefore, the heat from the light can be transmitted to each of the panels 12-14. Thus, if the direction of the air flow is toward the liquid crystal panel, the temperature may increase too much. By changing the direction of the air flow, then air will not flow from the light source toward the panel unless the temperature of the panel is under the predetermined temperature.

In contrast, in the technology described and claimed by Applicant's specification, the cooling fan provides an air path which is positioned at an area different from the area in which the optical element (liquid crystal panel) is provided. Thus, the cooling fan does not contribute substantially to the cooling of the panel, but is for the exclusive use of cooling the light source. Thus, according to Applicant's invention, the heat

**Amendments to the Drawings:**

The attached annotated sheets of drawing include changes to Figures 4A, 4B, and 7A. These sheets are submitted for the approval of the Examiner.

Attachments: Annotated Sheets Showing Changes (2)

from the light source unit will not influence the liquid crystal panel. Furthermore, the direction of flow of cooling air can be changed selectively, also without influence on other optical elements in the system.

The Examiner has also relied upon *Fuse*, U.S. Patent 6,280,038, in view of *Takahashi*, JP Patent 2001-185884. *Fuse* discloses a structure in which air is taken in through three ventilation units 61-63 to cool the lamp power supply 31; the light valves 14, 16, 21; mirrors 10, 15, etc. Finally, the light source is cooled, including the lamp 1 and reflector 3, and then the air is exhausted through fan 28.

In *Fuse* the light source is cooled by the cooling air W3 from the ventilation unit 61 and the cooling air W6 from the ventilation unit 62. Thus, the light source, the optical elements, including valves 14, 16 and 21, mirrors 10, 15, etc., are all placed in the same ventilation path. In addition, in *Fuse* the concept of changing the direction of the ventilating air is not described. In contrast, in Applicant's invention as described above, the cooling fan provides a cooling air path which is positioned in an area different from the area in which the optical element, including the liquid crystal panel, is provided. The light source unit is placed in this cooling air path, and the cooling fan is for the exclusive use of cooling the light source. Hence, even if the condition around the light source unit is changed, there is no influence on the power supply, or the optical elements.

*Takahashi* discloses a structure in which the direction of the exhaust fan 4 can be changed. In contrast, in Applicant's claimed invention (see claims 4 and 9), even if the direction of the cooling air is changed, the cooling air path is not changed. As a result, in Applicant's invention, the light source unit is cooled with high efficiency without influencing the optic elements.

For these reasons all of the claims now presented for examination are believed to distinguish the cited references.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



Robert C. Colwell  
Reg. No. 27,431

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 650-326-2400  
Fax: 415-576-0300  
RCC:mks  
60465420 v1